REMARKS:

Claims 1 and 3-8 have been considered. The withdrawn claims are maintained, however, in case they claim generic to the non-elected species is found allowable.

The Examiner has rejected claim 1 as being indefinite as to what is meant by the substrate 15 defining a "limit" to the internal process space.

In claim 1, the word "limit" has been changed to --boundary-- and explains that the substrate 15 defines one boundary of the process space. This is clearly shown in Figs. 1 and 2 where the bottom of the processing space is bounded by the substrate 15 in the same way that a pizza bounds the bottom of an oven space in which it is being cooked.

The Examiner has also objected to the various characterizing features of the dielectric layer 11. Changes have been made in the manner which is believed sufficient and correct under 35 U.S.C. §112.

Firstly, it is explained that the dielectric layer 11 is, in fact, a capacitor that is electrically connected in series to the substrate 15 and the plasma. Further, the claim continues to call for the dielectric layer to have "capacitance per unit surface values" which is believed understandable by those skilled in the art. A capacitor, in its simplest form, is a pair of spaced apart plates, has a capacitance which is a function of the stored electric charge on one or both of the plates. The "capacitance per unit surface value" means the ratio of capacitance (C) of the capacitor, divided by the area of the plates. In reality, however, the "capacitance per unit surface values" is not completely constant due to edge effects caused by stray fields or, as described in the specification, by standing wave effects due to RF voltages. Both may lead to non-uniformity in the process. One must then define a location-dependent capacitance and, according to the invention, provide deviations in the

otherwise constant capacitance to compensate for non-uniformity in the process. This non-uniformity is compensated by the non-uniform manner in which the capacitance changes along the general surface 15a of the substrate 15. All of these are believed clear from of claim 1 as now presented.

In passing, claim 1 has also now been limited to use of a radio frequency generator for generating frequencies greater than 13.56 MHz (see the specification at page 2, lines 11-15) and for large substrates having a largest diameter of at least 0.7 m (see the specification at page 6, lines 5-11). This takes the subject matter of the application substantially outside the contemplated field of the Japanese reference to Hanada as will be discussed later in these remarks.

Claim 3 has also been amended to clarify its language with regard to the location-dependence characteristic of the capacitance of the dielectric layer.

By this amendment, thus the application and claims are believed to be in proper form under 35 U.S.C. §112.

The Examiner has also rejected claims 1 and 3-8 as being fully anticipated by the Japanese reference to Hanada.

As noted above, claim 1 and thus all the claims dependent therefrom have been limited to a relatively large substrate processed under a high RF frequency plasma. Hanada contemplates plasma treatment for semiconductor wafers of industry standard size, namely a substrate having a maximum diameter of 30 cm or less than half the contemplated size of the smallest substrate to be processed according to the present invention and thus one-quarter (1/4) of the area of such a substrate.

According to a computer translation of the Hanada reference, paragraph [0005] of

the reference is limited to frequencies lower than 13.56 MHz. Both, because of the smaller size and the lower frequency in Hanada, the problem of "standing waves" due to the RF plasma excitation does not occur. The skilled artisan would appreciate that such problems would not occur at such low frequencies and small sizes.

The skilled artisan thus would not anticipate claim 1, nor find it obvious from a reading of Hanada alone or in combination with any of the other cited references.

Hanada's problem is different and his solution is different despite the visual similarity between the drawings of the present invention and the drawings of Hanada.

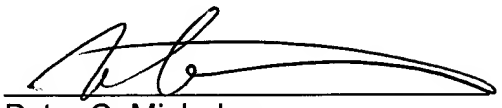
It is assumed that Hanada's problems are caused by chemistry and/or gas distribution (see paragraph [0012] of the reference) and not by standing wave problems. Accordingly, the selection of the non-uniformity of capacitance would be different but in the invention claimed and not obvious or anticipated by Hanada.

The dependent claims distinguish the invention even further from the prior art.

The withdrawn claims are also retained since they are believed to be patentable over the prior art to further limit the generic claims. Reconsideration of the withdrawn claims is therefore also requested.

By this amendment, thus the application and claims are believed to be in condition for allowance and favorable action is respectfully requested.

Respectfully submitted,



Peter C. Michalos
Reg. No. 28,643
Attorney for Applicants
(845) 359-7700

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NOTARO & MICHALOS P.C.
100 Dutch Hill Road, Suite 110
Orangeburg, New York 10962-2100

PCM:kat
Enc.